

ATTACHMENT 1 – DFG/OSPR CALCULATION OF SPILLED QUANTITY

COSCO BUSAN

BUNKER TANKWISE PRESENT DISTRIBUTION AFTER COLLISION (AFTER REMAINING FO TRANSFERRED FROM 3P & 4P TO FO DB, O'FLOW, SETT & LS SETT TK)

DATE 8-Nov-2007

Time:1700 Hrs

NAME	100 % Capacity (M3)	SOUNDING	ULLAGE	CUBIC M
NO3 P	879.3	232286.43		5
NO3 S	879.3	5520.42	1440	92
NO4P	864.2	225297.44	1537	40.5
NO4 S	864.2	5435.65	290	736.5
NO5P	933.9		266	819.6
NO5 S	933.9		290	805.7
NO6 P	746.2		1118	223.7
NO6 S	746.2		1140	238.1
DB TK	501.5	235		453.3
OVERFLOW	176.5	278		117.1
SETT TK	123.2		143	113.3
SERV TK	120.6		383	89.1
LS SETT	120.5	978		91.2
LS SERV	120.6		345	92.2
			TOTAL	3917.3

Damaged tank

Damaged tank

13209A-6
31.449 BBLs
10698.966 gal
294.737

Calculation of spilled quantity:

Based on volumes of oil in damaged tanks (3P & 4P) and tanks where FO transferred(DB, Overflow, settling and low sulphur settling tank)

Damaged tanks	Departure ROB (m3)	Present ROB (M3) at 1700 Hrs on 08/11/07	Difference
FO 3(P)	91	5	86
FO 4(P)	745	40.5	704.5
		Total diff .	790.5

Tanks where oil transferred	Departure ROB (m3)	Present ROB (M3) at 1700 Hrs on 08/11/07	Difference
Fuel oil DB tank	26.7	453.3	426.6
Overflow tank	49	117.1	68.1
FO settling tank	110.1	113.3	3.2
Low Sulphur sett tank	17	91.2	89.5
		Oil transferred	587.4

Estimated Qty of FO spilled =

790.5 - 587.4 =

203.1 M3

53653.33
1277.46

Remark. 1) Due to damage FO tank 3(P) could not be sounded and a rough figure of unpumpable quantity remaining in 3(P) was taken as 5 M3. Exact amount will be known after actual sounding of unpumpable oil.

"EVIDENCE: 3095030 #009-DF

BUSAN

COSCO BUSAN

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Fuel oil DB tank	26.7	453.3	426.6
Overflow tank	49	117.1	68.1
FO settling tank	110.1	113.3	3.2
Low Sulphur sett tank	1.7	91.2	89.5
		Oil transferred	587.4

Estimated Qty of FO spilled = 790.5 - 587.4 = **203.1** M3

Remark: 1) Due to damage FO tank 3(P) could not be sounded and a rough figure of unpumpable quantity remaining in 3(P) was taken as 5 M3. Exact amount will be known after actual sounding of unpumpable oil.

OSPR

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COSCO BUSAN
MASTER

DATE:6-Nov Time:0900

				TRIM :-1,0	
NAME	SOUNDING	CUBIC M	TEMP	SPEC GRA IN 15 C	MT
NO3 P	14,18	90,95	39	0,9873	80,4
NO3 S	14,37	101,11	39	0,9873	98,3
NO4P	2,53	753,91	19	0,9875	742,5
NO4 S	2,41	761,03	16	0,9875	751,1
NO5P	2,6	820,2	17	0,9873	808,7
NO5 S	2,85	806,17	17	0,9873	794,9
NO6 P	11,38	228,48	18	0,9873	225,1
NO6 S	11,49	216,8	18	0,9873	213,6
DB TK	0,17	26,68	15	0,9873	26,3
OVERFLOW	1,16	49	45	0,9873	47,4
SETT TK	7,59	110,08	68	0,9873	105
SERV TK	73,56	117,09	90	0,9873	110
LS SETT	0,16	1,72	65		1,6
LS SERV	10,6	99,1	65		94
				TOTAL	4098,9
DO STR					
DO SETT	2,16	26,766		0,85	22,8
DO SERV	4,41	54,7		0,85	46,5
				TOTAL	69,3

#31 90 m³
 40 m³

 50 m³.

to DB Tk.

Pusan IFO 380

4P 742 m/E LB
to DB the 560 IFO 380
182 m/E